

COMMUNITY SCALE RENEWABLE ENERGY PROJECTS AGRICULTURE PERSPECTIVE

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CALIFORNIA DEPARTMENT OF
FOOD & AGRICULTURE



PRESENTATION OUTLINE

- Sources/feedstock
- Renewable energy opportunities
 - Anaerobic digestion
 - Solar
- CDFA incentives on using renewable energy
- Importance

SOURCES/FEEDSTOCKS



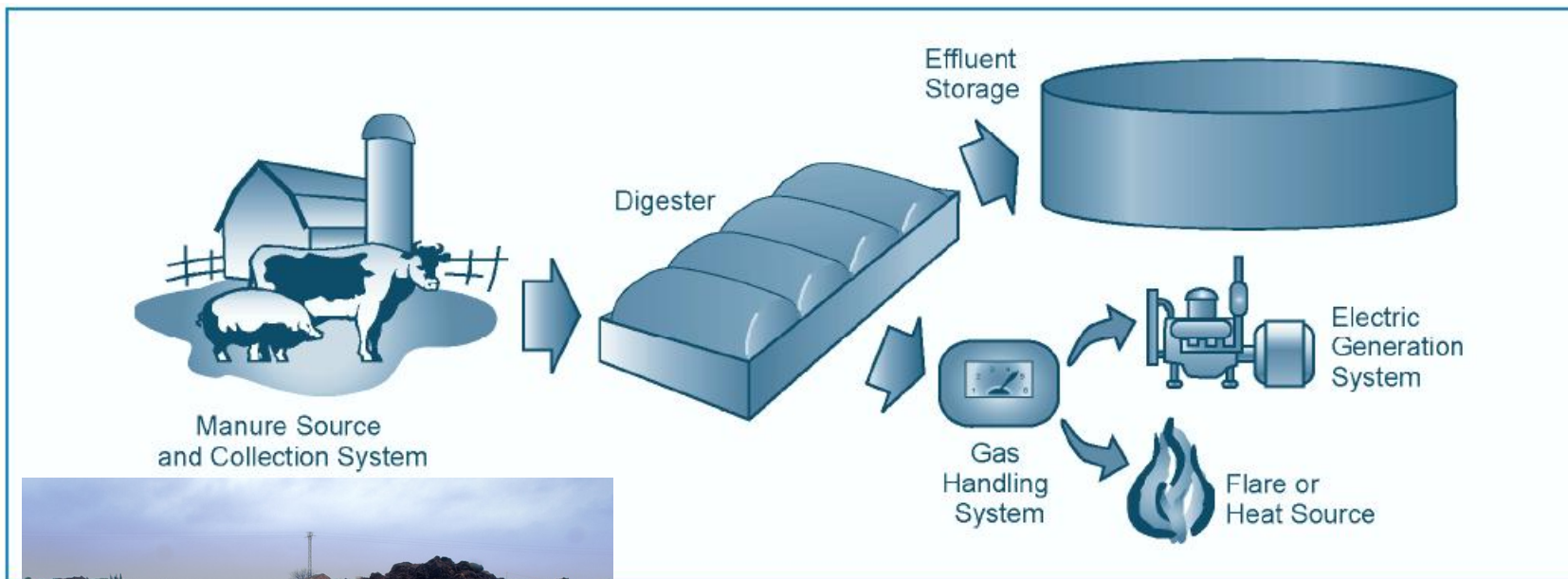
= Burning = Air Pollution



= Landfill = Methane (GHG)

RENEWABLE ENERGY PRODUCTION

- Anaerobic Digestion



Creates methane and use it to power electricity generating

Engine

CDFA PROGRAMS THAT INCLUDE RENEWABLE ENERGY

- CDFA's Dairy Digester Research and Development Program (DDRDP) was authorized by the Budget Act of 2014 (Chapter 25, Statutes of 2014).
- *Objective:* to support projects that reduce greenhouse gas (GHG) emissions from California dairy operations by capturing GHGs, harnessing GHGs as a renewable bioenergy source and promoting low carbon fuels
- Additional benefit of producing electricity from methane collected via anaerobic digester

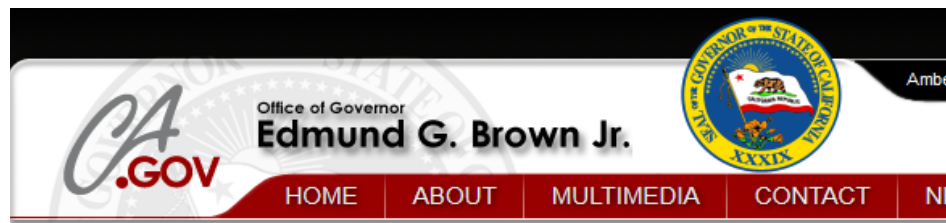
RENEWABLE ENERGY PRODUCTION

- Solar/wind power use



CDFA PROGRAMS THAT INCLUDE RENEWABLE ENERGY

- Emergency drought legislation bill (SB 103) signed by Governor Brown on March 1, 2014



GOVERNOR BROWN SIGNS DROUGHT LEGISLATION

3-1-2014

SACRAMENTO – As California grapples with the driest period in its history, Governor Edmund G. Brown Jr. today signed legislation to assist drought-affected communities and provide funding to better use local water supplies.

"Legislators across the aisle have now voted to help hard-pressed communities that face water shortages," said Governor Brown. "This legislation marks a crucial step – but Californians must continue to take every action possible to conserve water."

The legislation had broad, bipartisan support. SB 103 passed 34-2 in the Senate and 64-3 in the Assembly. SB 104 passed 33-3 in the Senate and 68-1 in the Assembly. The bills provide \$687.4 million to support drought relief, including money for housing and food for workers directly impacted by the drought, bond funds for projects to help local communities more efficiently capture and manage water and funding for securing emergency drinking water supplies for drought-impacted communities.

\$10 million from the Greenhouse Gas Emissions Fund for the California Department of Food and Agriculture to invest in irrigation and water pumping systems that reduce water use, energy use and greenhouse gas emissions

CDFA PROGRAMS THAT INCLUDE RENEWABLE ENERGY

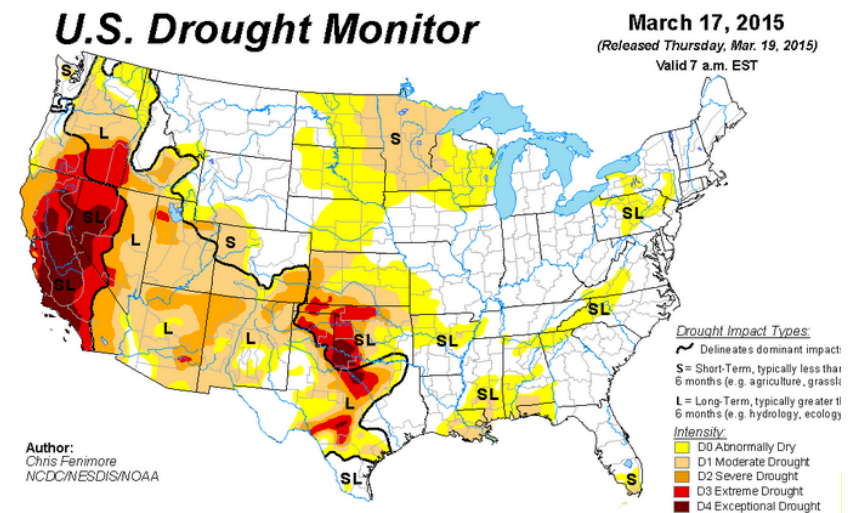
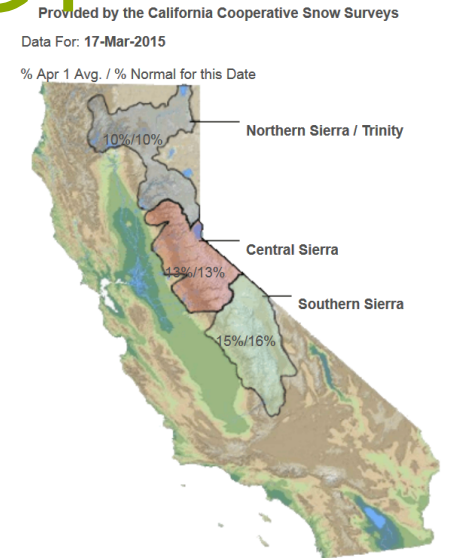
- State Water Efficiency and Enhancement Program (SWEEP)
- July 1, 2014 to June 30, 2015
- The SWEEP was implemented under the authority of the
Environmental Farming Act of 1995

Division 1, Part 1, Chapter 3, Article 8.5, Sections 560-568, Section 566 (a)

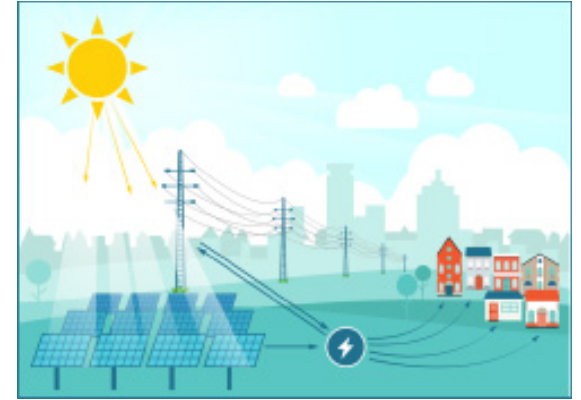
The department shall establish and oversee an environmental farming program. **The program shall provide incentives to farmers whose practices promote the well-being of ecosystems, air quality, and wildlife and their habitat.**

CDFA PROGRAMS THAT INCLUDE RENEWABLE ENERGY

- Water savings
- GHG reductions
(metric tons CO₂ equivalent / year/acre)
- Incentivized the conversion of a fossil fuel pump to solar, wind or electric



IMPORTANCE



- Reduce by product waste
- General renewable energy and fuel
- Reduce climate change causing GHGs
- Reduce infrastructure costs (trucking of waste)
- Builds our organic systems (soil organic matter)
- Builds climate change resilience
- Contributes to facilitating local technical jobs

THANKS.....

